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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,613	08/28/2000	Toshiyuki Yamada	ASA-919	5525
24956	7590	05/18/2004	EXAMINER	
MATTINGLY, STANGER & MALUR, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			EBRAHIMI DEHKORDY, SAEID	
		ART UNIT	PAPER NUMBER	
		2626	7	
DATE MAILED: 05/18/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/648,613	YAMADA ET AL.
	Examiner	Art Unit
	Saeid Ebrahimi-dehKordy	2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4.6</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhattacharjya et al (U.S. patent 5,963,714) in view of Barry et al (U.S. patent 5,745,657)

Regarding claim 1 and 9 Bhattacharjya et al disclose: A color printing apparatus for printing by mixing a plurality of primary colors comprising: a printer driver for receiving a print instruction of print data issued from an application program (please note Fig.2 column 5 lines 8-33) and for rasterizing said print data to produce con-tone/multi-bits bitmap data and bi-tone/single-bit bitmap data (please note column 6 lines 12-48) However Bhattacharjya et al does not disclose: a page memory for independently storing therein to both said con-tone/multi-bits bitmap data and said bi-tone/single-bit bitmap data; a control unit for executing a control operation in such a manner that said con-tone/multi bits bitmap data is converted into con-tone/multi-bits print data, said bi-tone/single-bit bitmap data is converted into bi-tone/single-bit print data, and at least one of said con-tone/multi-bits print data and said bi-tone/single-bit print data is stored into said page memory in a bitmap format; and an output control unit for reading at least any one of said con-tone/multi-bits print data and said bi-tone/single-

bit print data from said page memory, and for logically synthesizing said print data with each other to output the synthesized print data to a color printing unit, On the other hand Barry et al disclose: a page memory for independently storing therein to both said con-tone/multi-bits bitmap data and said bi-tone/single-bit bitmap data (please note Fig.1 items 18 and 20 where contone and Bi-level data is stored, column 4 lines 1-12 where the contone data is stored in memory 18 and be-level data is stored in the memory 20) a control unit for executing a control operation in such a manner that said con-tone/multi bits bitmap data is converted into con-tone/multi-bits print data said bi-tone/single-bit bitmap data is converted into bi-tone/single-bit print data (please note column 4 lines 12-16) and at least one of said con-tone/multi-bits print data and said bi-tone/single-bit print data is stored into said page memory in a bitmap format (please note column 4 lines 17-22) and an output control unit for reading at least any one of said con-tone/multi-bits print data and said bi-tone/single-bit print data from said page memory (please note column 4 lines 29-40) and for logically synthesizing said print data with each other to output the synthesized print data to a color printing unit (please note column 4 lines 5-15).

Therefore it would have been obvious to a person of ordinary skill in art at the time of the invention to modify Bhattacharjya et al's invention according to the teaching of Barry et al, where Barry et al in the same field of endeavor teaches the way contone and bi-level received from the printer driver is stored in the separate memories for the purpose of being able to synthesize the data to sent to the printer.

Regarding claim 2 Bhattacharjya et al disclose: A color printing apparatus as claimed in claim 1 wherein, said printer driver includes a multi-bits rasterize flag for indicating that said con-tone/multi bits bitmap data is rasterized, and also a single-bit rasterize flag for indicating that said bi-tone/single bit bitmap data is rasterized (please note column 6 lines 25-48).

Regarding claim 3 Bhattacharjya et al disclose: A color printing apparatus as claimed in claim 1 wherein, said output control unit includes: a color converting unit for separating said con-tone/multi-bits bitmap data into a plurality of primary colors and an OR gate circuit for OR-gating bit data of said bi-tone/single-bit bitmap data and said bi tone/single-bit bitmap data every bit position separated from said con-tone/multi-bits bitmap data by said color converting unit (please note column 6 lines 35-48).

Regarding claim 4 Barry et al disclose: A color printing apparatus as claimed in claim 3 wherein, said output control unit includes, an inverting circuit for inverting said bi tone/single-bit bitmap data every bit; and an AND gate circuit for AND-gating said inverted bitmap data and said con-tone/multi-bits bitmap data every bit position (please note column 13 lines 49-59).

Regarding claim 5 Barry et al disclose: A color printing apparatus as claimed in claim 3 wherein, when said con-tone/multi-bits print data is stored into said page memory said control unit sets the bit position of the bi-tone/single-bit print data within said con-tone/multi-bits print data to non-print data in response to said single-bit rasterize flag (please note column 4 lines 1-16).

Regarding claim 6 Barry et al disclose: A color printing apparatus as claimed in claim 1 wherein, said control unit stores both said bi tone/single-bit print data and said con-tone/multi-bits print data into plural sub-divided areas of said page memory in the unit of a block based upon address information designated to said print data and sets said area which is not designated by said address information to a non-print area (please note column 17-24).

Regarding claim 7 Bhattacharjya et al disclose: A color printing apparatus as claimed in claim 1 wherein, said output control unit judges as to whether or not both said con-tone/multi-bits print data and said bi-tone/single-bit print data stored in said page memory are required to be printed out in response to both said single-bit rasterize flag and said multi-bits rasterize flag and said output control unit outputs only said print data to the color printing unit (please note column 6 lines 13-23).

Regarding claim 8 and 13 Barry et al disclose: A color printing apparatus as claimed in claim 1 wherein, said control unit designates resolution of said bi-tone/single-bit bitmap data as first resolution equal to the output resolution of the color printing unit and designates resolution of said con-tone/multi bits bitmap data as second resolution equal to 1/n of said first resolution and also stores both said bi- tone/single-bit bitmap data and said con-tone/multi bits bitmap data into said page memory and said output control unit includes an enlarging circuit for enlarging said con-tone/multi bits bitmap data having said second resolution to said first resolution to logically synthesize said enlarged con-tone/multi-bits bitmap data and said bi tone/single-bit bitmap data and

output synthesized bitmap data to the color printing unit (please note column 4 lines 29-67 and column 5 lines 1-26).

Regarding claim 11 Barry et al disclose: A printing system as claimed in claim 9 wherein, said color printing apparatus judges as to whether or not both said con-tone/multi-bits print data and said bi-tone/single-bit print data which are stored into said page memory in a bitmap format are required to be printed out to thereby print out at least one of said con-tone/multi-bits print data and said bi-tone/single-bit print data (please note column 3 lines 61-67 and column 4 lines 1-16).

Regarding claim 12 Barry et al disclose: A printing system as claimed in claim 11 wherein, said color printing apparatus judges as to whether or not both said con-tone/multi-bits print data and said bi-tone/single-bit data, which are stored into said page memory in a bitmap format are required to be printed out based upon said single-bits rasterize flag and said multi-bits rasterize flag (please note column 4 lines 17-40).

Contact Information

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Saeid Ebrahimi-Dehkordy* whose telephone number is (703) 306-3487.

The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams, can be reached at (703) 305-4863.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

Or faxed to:

(703) 872-9306, or (703) 308-9052 (for **formal** communications; please
mark
"EXPEDITED PROCEDURE")

Or:

(703) 306-5406 (for **informal** or **draft** communications, please label
"PROPOSED" or **"DRAFT"**)

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be
directed to the Group Receptionist whose telephone number is (703) 305-4750.

Saeid Ebrahimi-Dehkordy
Patent Examiner
Group Art Unit 2626
May 6 2004

Kimberly Williams
KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER